

## DC-8 - AFRC 10/20/18 - 10/21/18

Aircraft: [DC-8 - AFRC](#) ([See full schedule](#))

Flight Number: 1299

Payload Configuration: ATM GPS/NAV\_ATM Headwall\_ATM-T6/T7\_ATM FLIR\_ATM CAMBOT, MCoRDS/UWB Radar, Gravimeter

Nav Data Collected: Yes

Total Flight Time: 10.7 hours

Submitted by: Chris Jennison on 10/21/18

Flight Segments:

From:	SCCI	To:	SCCI
Start:	10/20/18 13:26 Z	Finish:	10/21/18 00:08 Z
Flight Time:	10.7 hours		
Log Number:	<a href="#">198006</a>	PI:	Joseph MacGregor
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	<p>"Foundation-Academy IS-2 B", which is a new OIB flight and consists of four ICESat-2 tracks crossing the Academy and Support Force ice streams. Prior to taxi, winds were light, but out of the southeast, requiring a runway 07 takeoff. This caused a ~20 minute delay in takeoff, due to incoming traffic and working out VFR/IFR clearances with the tower. Once getting airborne, the flight went smoothly. We did a ramp overpass at 1500ft AGL immediately following takeoff. The aircraft and science instruments all performed well. The #4 engine oil quantity indicator gauge was reading consistently low and is likely faulty or there is a faulty sensor. We had the Steelhead film crew onboard again. They conducted several interviews and gathered lots of video footage. ATM: 100% data collection, instruments are all working well, no issues MCoRDS: 100% data collection, instrument is working well, no issues Snow Radar: 100% data collection, instrument is working well, no issues Gravimeter: 100% data collection, instrument is working well, no issues Data: 100% data collection for KT-19, no issues</p>		

Flight Hour Summary:

	<b>198006</b>
Flight Hours Approved in SOFRS	345.8
Total Used	292.8
Total Remaining	53

### 198006 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">10/02/18</a>	1287	Check	2.6	2.6	343.2	0
<a href="#">10/08/18</a>	1289	Transit	10.1	12.7	333.1	0
<a href="#">10/08/18</a>	1290	Transit	2.8	15.5	330.3	0
<a href="#">10/10/18 - 10/11/18</a>	1291	Science	11.5	27	318.8	0
<a href="#">10/11/18 - 10/12/18</a>	1292	Science	11.6	38.6	307.2	0
<a href="#">10/12/18 - 10/13/18</a>	1293	Science	11.3	49.9	295.9	0
<a href="#">10/13/18 - 10/14/18</a>	1294	Science	10.7	60.6	285.2	0
<a href="#">10/15/18 - 10/16/18</a>	1295	Science	11.1	71.7	274.1	0
<a href="#">10/16/18 - 10/17/18</a>	1296	Science	10.1	81.8	264	0
<a href="#">10/18/18 - 10/19/18</a>	1297	Science	11.1	92.9	252.9	0
<a href="#">10/19/18 - 10/20/18</a>	1298	Science	10.8	103.7	242.1	0

<a href="#">10/20/18 - 10/21/18</a>	1299	Science	10.7	114.4	231.4	0
<a href="#">10/22/18 - 10/23/18</a>	1300	Science	11.1	125.5	220.3	0
<a href="#">10/27/18 - 10/28/18</a>	1301	Science	11.3	136.8	209	0
<a href="#">10/30/18 - 10/31/18</a>	1302	Science	11.7	148.5	197.3	0
<a href="#">10/31/18 - 11/01/18</a>	1303	Science	11.3	159.8	186	0
<a href="#">11/01/18</a>	1304	Transit	0.6	160.4	185.4	0
<a href="#">11/03/18 - 11/04/18</a>	1305	Science	11	171.4	174.4	0
<a href="#">11/04/18</a>	1306	Science	10.8	182.2	163.6	0
<a href="#">11/05/18</a>	1307	Science	10.4	192.6	153.2	0
<a href="#">11/07/18</a>	1308	Science	10.4	203	142.8	0
<a href="#">11/09/18 - 11/10/18</a>	1309	Science	11.1	214.1	131.7	0
<a href="#">11/10/18 - 11/11/18</a>	1310	Science	10.6	224.7	121.1	0
<a href="#">11/11/18</a>	1311	Science	10.8	235.5	110.3	0
<a href="#">11/12/18</a>	1312	Science	10.7	246.2	99.6	0
<a href="#">11/14/18 - 11/15/18</a>	1313	Science	11.2	257.4	88.4	0
<a href="#">11/15/18</a>	1314	Science	10.3	267.7	78.1	0
<a href="#">11/16/18 - 11/17/18</a>	1315	Science	10.1	277.8	68	0
<a href="#">11/19/18</a>	1316	Transit	3.4	281.2	64.6	0
<a href="#">11/21/18</a>	1317	Transit	11.6	292.8	53	0

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

#### Related Science Report:

### OIB - DC-8 - AFRC 10/20/18 Science Report

#### Mission: OIB

#### Mission Summary:

Mission: Foundation Academy IS-2 B  
Priority: High

IceBridge successfully completed the high priority land ice mission Foundation Academy IS-2 B today. As predicted, the outflow from the continent caused clear skies and no weather issues during our flight. Thus, we were able to have 100% data collection along the lines.

This OIB flight was designed to target the strong beam of each beam pair along ICESat-2 ground tracks that cross the channel of Academy and Support Force ice streams. This was also the first time this mission has been flown.

The 4 ICESat-2 ground tracks that were flown and their latency between the IS2 crossovers are listed below:  
0238, t = 6 days  
0939, t = 40days  
0695, t = 24 days  
0451, t = 8days

Outreach: Since today is Saturday and schools are not in session, no class chats were conducted during our

mission.

Media: OIB hosted Steelhead a 3-person documentary crew during our mission today. Various instrument team members onboard were interviewed. Their feature length documentary 'The Last Glacier' will have ~15 minutes allotted to OIB.

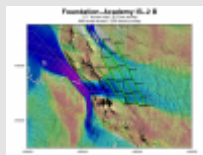
Outlook: Tomorrow we will take a mandatory crew rest hard down day and plan to resume science missions on Monday, weather permitting.

List of Images:

1. Map of today's science mission (John Sonntag/NASA)
2. MCCORDS radar echogram over the Academy Glacier along the first IS-2 ground track. Showing layers of ice and bedrock. (Jilu Li/KU CrESiS)
3. 50 cm stastugi present in the Academy glacier channel which is nicely picked up by the ATM T-6 laser. (Matt Linkswiler/NASA)
4. DC8 flying over crevasses and nunataks in the Pensacola Mountains. (Jeremy Harbeck/NASA)
5. Alexey Chibosov walking up the stairs to the NASA DC8 after cleaning the ATM window preflight (Jeremy Harbeck/NASA)
6. Jilu Li and Hara Talasila looking at MCCORDS data of ice thickness of at least 2400m in the Academy glacier channel during flight. (Jeremy Harbeck/NASA)

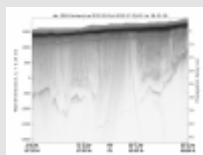
Images:

## Figure 1



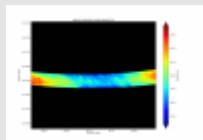
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## Figure 2



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## Figure 3



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## Figure 4



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## Figure 5



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## Figure 6



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**Submitted by:** Linette Boisvert on 10/25/18

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